Early outcome after surgery for active native and prosthetic aortic valve endocarditis


Background and aim of the study
Today, the in-hospital mortality of patients treated surgically for active aortic native and prosthetic valve endocarditis remains high. The study aim was to identify the preoperative and intraoperative predictors of early outcome.

Methods
Between January 2004 and December 2006, 75 patients (57 males, 18 females; mean age 61.6 +/- 14.1 years) underwent surgery for active native valve (NVE) or prosthetic aortic valve endocarditis (PVE).

Results
Active aortic NVE was present in 49 patients (65.3%), and PVE in 26 (34.7%). Staphylococcus species were the most common infecting microorganisms in both groups, while 20 cases (26.7%) were culture-negative. Except for significantly higher preoperative renal failure (RF) in patients with PVE (p = 0.01), the clinical characteristics were equally distributed. Four patient subsets were identified based on the extent of the infectious process: (i) locally controlled NVE (38.7%); (ii) locally uncontrolled NVE (26.7%); (iii) locally controlled PVE (14.6%); and (iv) locally uncontrolled PVE (20%). Aortic valve replacement (AVR) was performed with a stentless bioprosthesis in 53 cases (70.7%), a mechanical prosthesis in eight (10.6%), and a Ross procedure in 14 (18.7%). Concomitant active mitral valve endocarditis was treated in 17 patients (22.7%). Associated procedures were performed in 14 cases (18.7%). The in-hospital mortality was 24% (n = 18). Female gender (p = 0.0147), preoperative septic or cardiogenic shock (p = 0.0275) and previous embolic events (p = 0.0129) were identified as independent predictors for in-hospital mortality. Eight late deaths occurred; the estimated overall actuarial survival was 66.6 +/- 5.6% at 12 months and 60.7 +/- 6.5% at 24 months. On Cox multiple regression, age > 70 years (p = 0.0113), preoperative RF (p = 0.0015) and mitral valve surgery due to concomitant infective endocarditis (p = 0.0363) were significant adverse predictors of late death.

Conclusion
Surgery for active aortic valve infective endocarditis is associated with high operative mortality and morbidity. Failure of antibiotic therapy causing septic or cardiogenic shock and delayed referral to surgery may have a detrimental effect on early outcome. Surgical eradication of cardiac infections
should always be associated with the treatment of extracardiac septic foci, which could maintain a septic state and adversely influence early outcome. Adhesion to surgical guidelines, together with a multidisciplinary approach, may have a major impact on the early prognosis of these high-risk patients.

**J Heart Valve Dis 2008; 17(5):508**

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